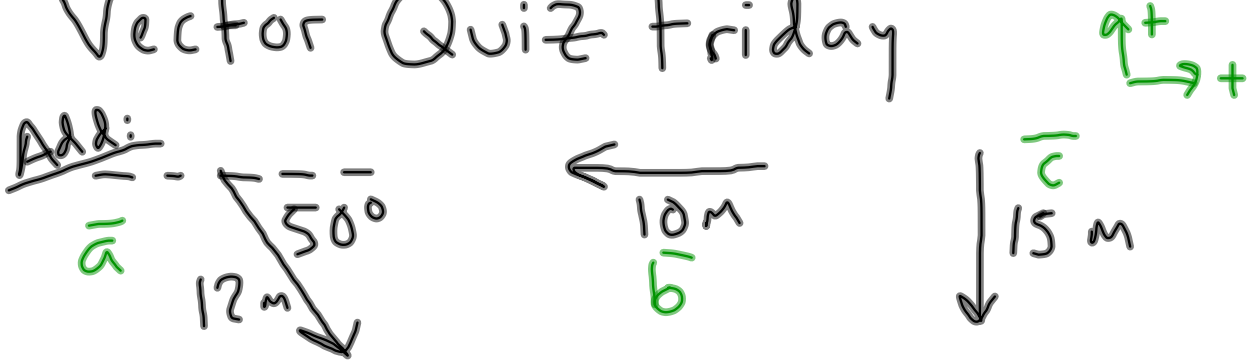
HW: p.47: 3, 4, 6

Vector Quiz Friday

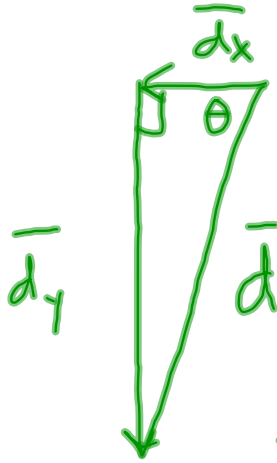


$a_x = (12\text{ m})\cos(50°)$ $\quad a_y = -(12\text{ m})\sin(50°)$

$b_x = -10\text{ m}$ $\quad b_y = 0\text{ m}$

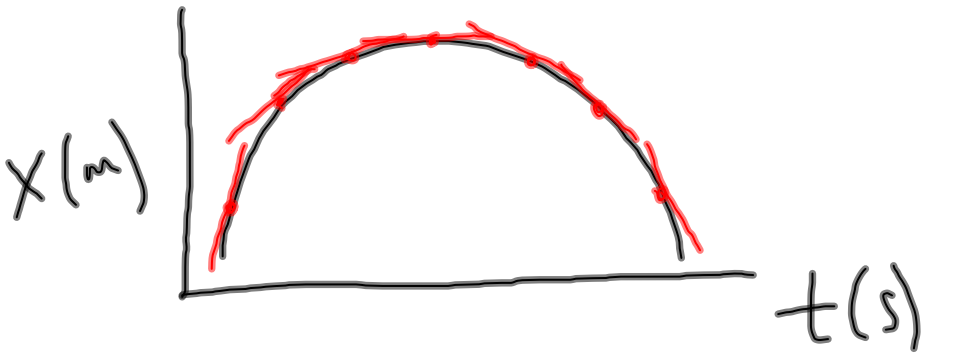
$+\ c_x = 0\text{ m}$ $\quad +\ c_y = -15\text{ m}$

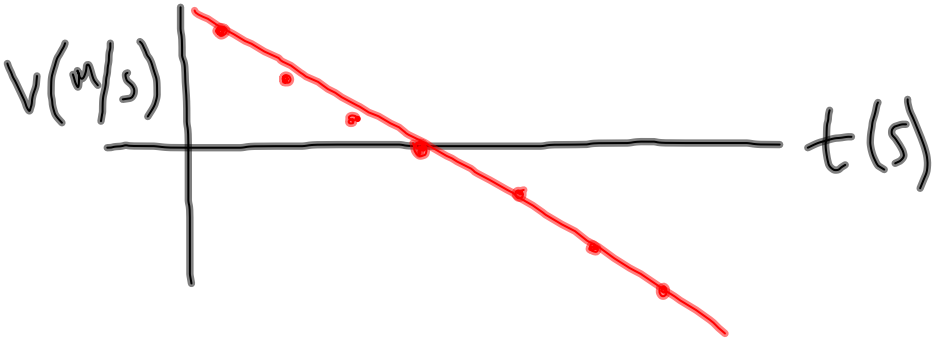
$d_x = -2.29\text{ m}$ $\quad d_y = -24.2\text{ m}$

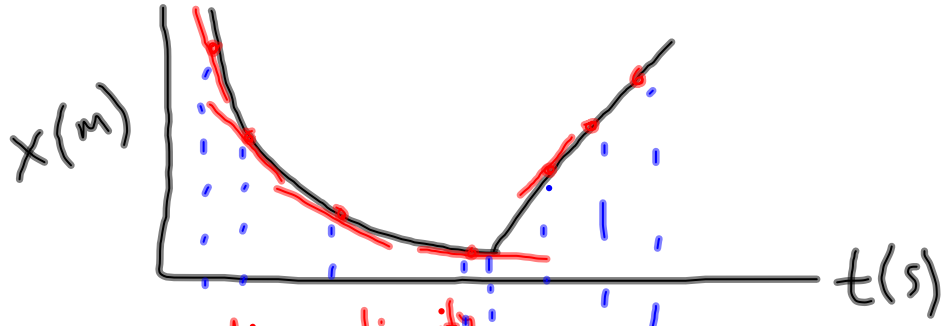


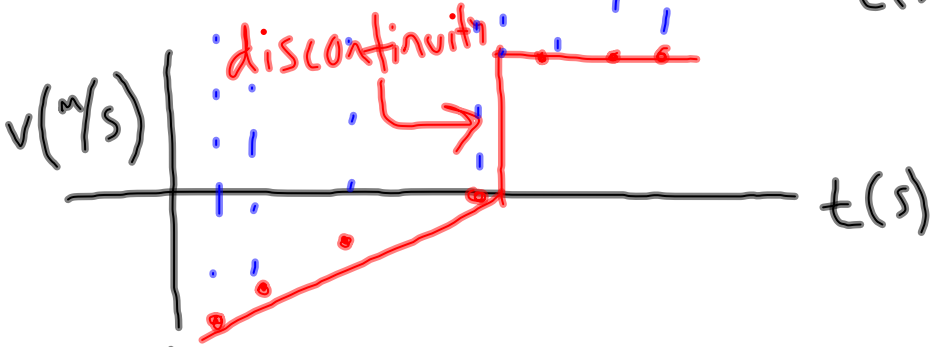
$\theta = \sin^{-1}\left(\frac{24.2}{24.3}\right) = 84.8°$

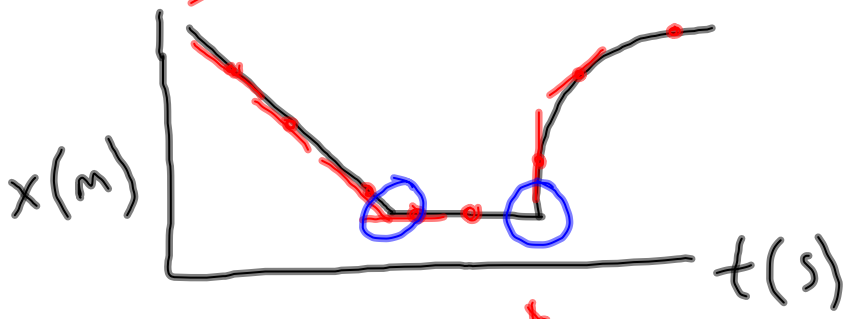
$\bar{d} = 24.3\text{ m}$ @ 84.8° S of W

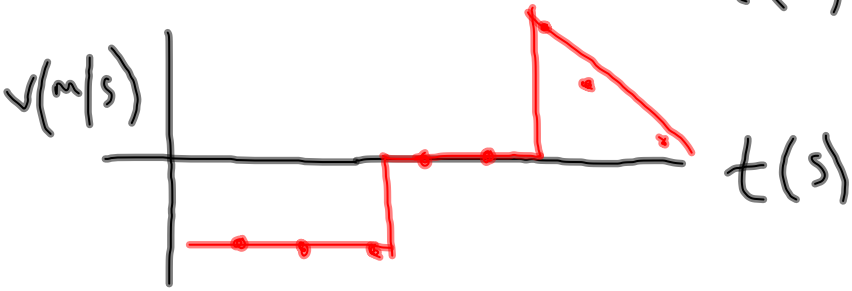

x(m)
t(s)


v(m/s)
t(s)


x(m)
t(s)

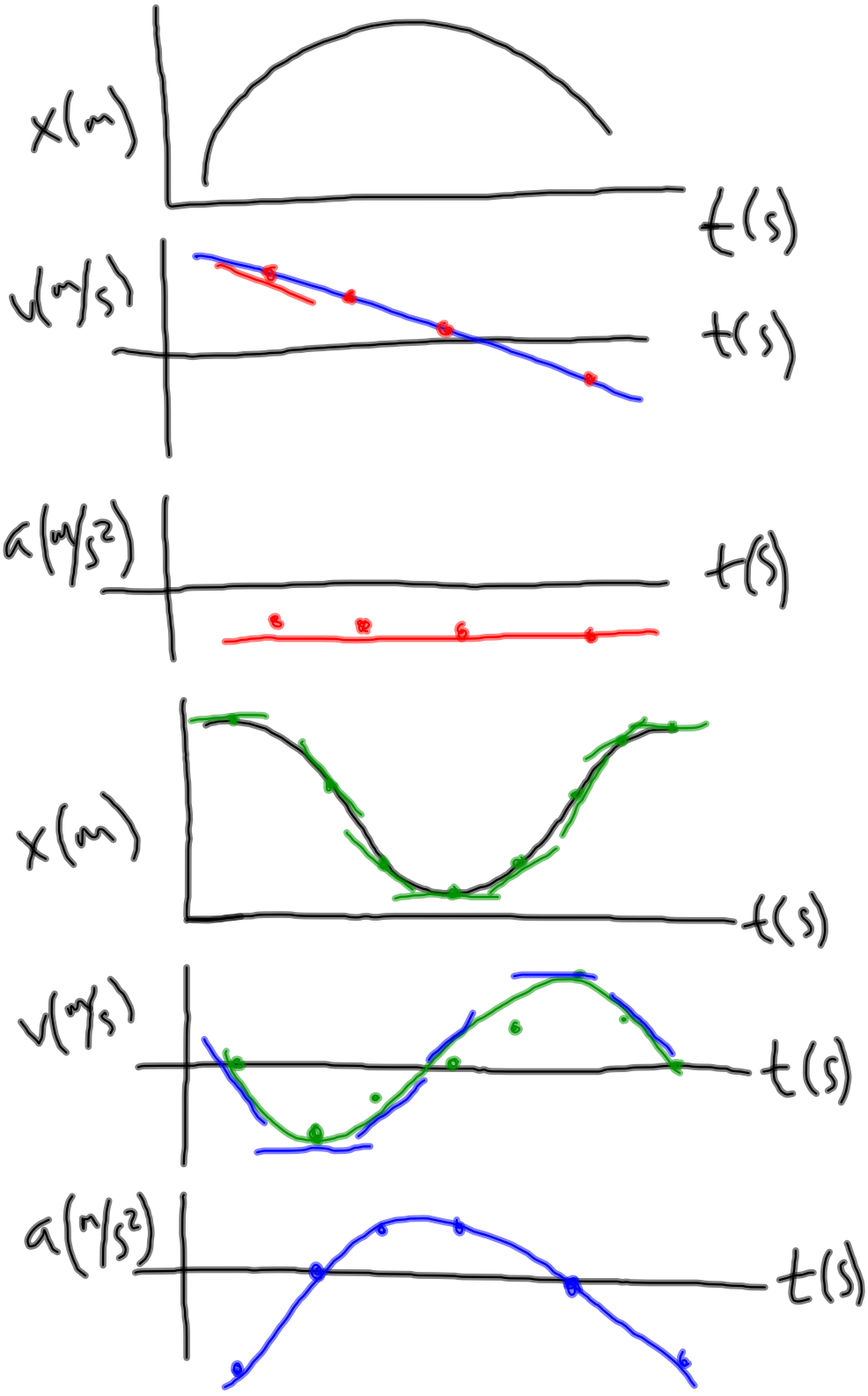

discontinuity
v(m/s)
t(s)


x(m)
t(s)


v(m/s)
t(s)

Acceleration:

- average $a = \frac{\Delta v}{\Delta t} = \frac{v_f - v_i}{t_f - t_i}$
- instantaneous → slope of tangent line on velocity/time graph


x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)
x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)